

IN THE ABSTRACT:

Please DELETE the Abstract in its entirety and substitute the following new Abstract.

A method of independently generating row parity information and column parity information in an encoding process using a low density parity check (LDPC) matrix includes generating code word vectors by generating column parity information using a parity check matrix and message information; selecting code word bits for generating row parity information among code word bits in the generated code word vectors; and generating the row parity information using the selected code word bits, where the selecting of the code word bits comprises: excluding code word bits related to the generation of other row parity information. Accordingly, independent parity information can be generated by generating row parity information on the basis of code word bits without related to generation of column parity information.